

**Grand Haven, MI**

**Board of Light and Power**

*Expedited Generator Interconnection*

*Requirements*

## **INTRODUCTION**

This Expedited Generator Interconnection Requirements document outlines the process, requirements, and agreements used to install or modify generation projects with generator output capacity that does not exceed 10 kW that are designed to operate in parallel with the Grand Haven, Michigan Board of Light and Power (“Utility”) electric system and are part of the Utility’s Net Metering Program.

## **ELIGIBILITY**

Any residential customer <sup>\*</sup> in good standing may install, own, and operate a “Net Metered” generation source(s), interconnected in parallel with the Utility’s distribution system if the following are met (subject to the requirements of the “Net Metering Agreement”):

1. Completed application describing the interconnected generation that includes a \$100 application fee.
2. The generation source is solar, wind, hydro, or other renewable energy system(s) approved by the Utility.
3. The total nameplate capacity of the generation source is 10 kilowatts or less.
4. The generation source is located on the eligible customer’s premises, is operated by said customer, and is interconnected through a single point of service.
5. The generation is used primarily to offset all or a part of the eligible customer’s electric load.
6. Eligible customers shall enter into an “Interconnection Agreement” and a “Net Metering Agreement” with the Utility before the generation source is allowed to interconnect to the Utility’s distribution system.
7. The Utility reserves the right to limit the total capacity available for Net Metering Service.

## **GENERAL**

1. All Customer-Owned generating facility installations shall comply with any and all applicable codes and standards, including but not limited to those listed in this document.

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<sup>\*</sup> Other non-residential customers may apply at the discretion of the Utility.

2. Interconnection shall not be allowed to the Utility's distribution system until the installation has been approved by an authorized municipal, county, or other governmental inspector where such inspection procedures are established.
3. Generation source shall comply with IEEE Std. 1547.

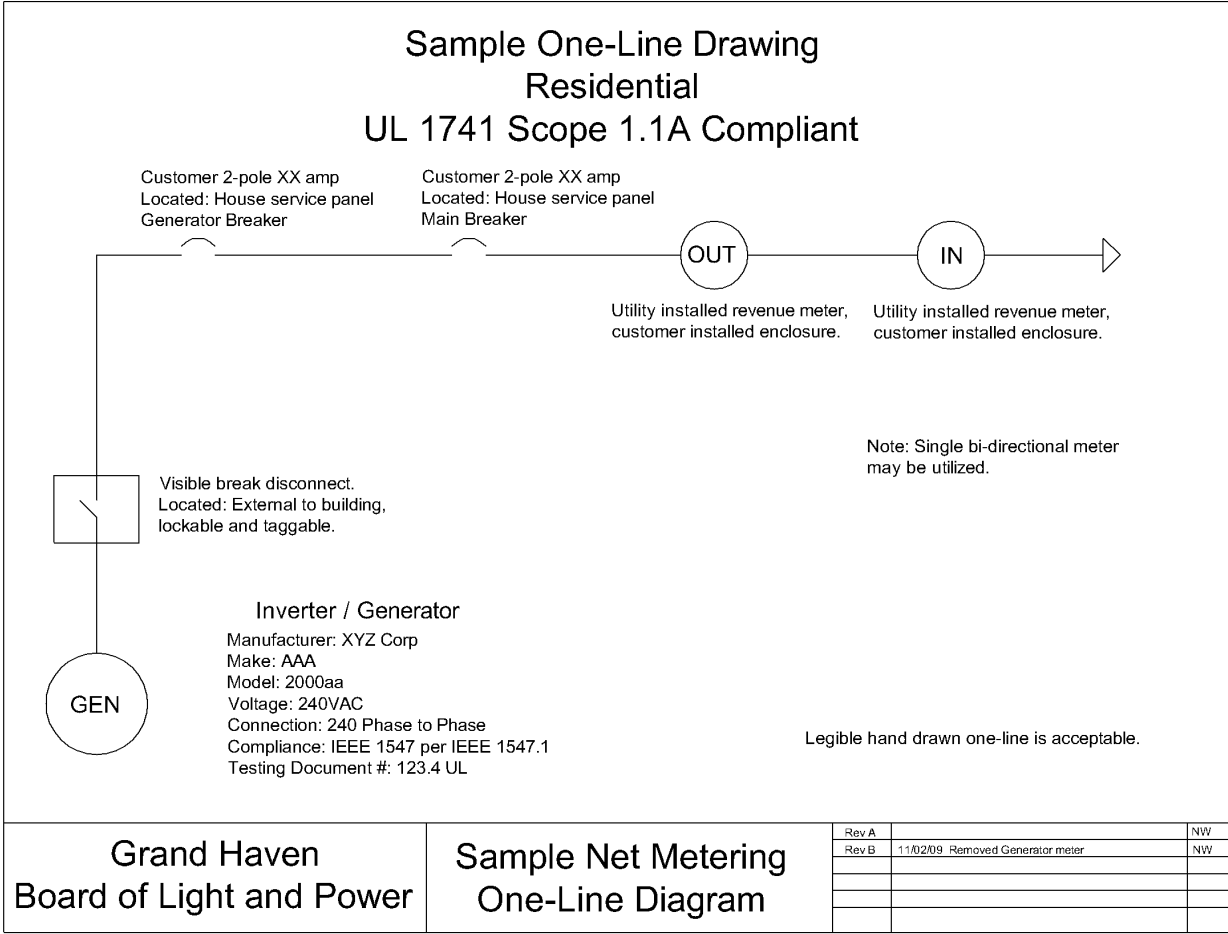
## **INSTALLATION AND OPERATION**

1. The eligible customer shall provide proof of a qualified installation of the generation source by a licensed electrical contractor and include a one line diagram (See Figure 1) of the electrical connections with specifications of the inverter and/or generation source.
2. The eligible customer shall install, operate, and maintain the generation source in accordance with the manufacturer's suggested practices.
3. A lockable manual disconnect switch with load-break capability shall be installed between the generation source and the Utility's distribution system and be accessible to Utility personnel at all times. This switch shall be labeled as follows: (See also Figure 1)



**"Utility-Generator Disconnect Switch"**

4. The Utility may isolate the eligible customer's generation source at any time if it is believed that continued operation of the generation source will create or contribute to a system emergency, for safety purposes, or for reliability purposes.
5. The Utility may perform on-site inspections to verify the proper installation and continued safe operation of the generation source, interconnection equipment, and net metering facilities. Inspections shall be done at reasonable times and with reasonable advance notice to the eligible customer.



**Figure 1**

**METERING**

1. The Utility shall have the option of metering with two watt-hour meters as shown above in Figure 1 or through a single bidirectional meter.
2. If a second watt-hour meter is used, one meter will measure kWh used by the eligible customer, and the other will measure the kWh exported by the customer to the Utility’s distribution system. If the Utility chooses to utilize a single bidirectional meter, that meter will measure the net kWh used by the eligible customer.

## GENERATOR INTERCONNECTION APPLICATION

1. The undersigned Customer Generator submits this Generator Interconnection Application with the application fee to interconnect a new Project to the Utility's distribution system.
2. The Customer Generator requesting interconnection to the Utility distribution system must provide the following information:
  - a. Description of the equipment configuration and proposed interconnection one-line diagram (one-line diagram must be attached to this Interconnection Application).
  - b. Project Developer (Single Point of Contact):

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

e-mail Address: \_\_\_\_\_

Project Site Address: \_\_\_\_\_

3. This Generator Interconnection Application shall be directed to the Utility representative as indicated below:

Engineering Department  
Board of Light and Power  
1700 Eaton Drive  
Grand Haven, Michigan 49417

4. I, the undersigned and authorized representative of the Customer Generator, submit this Generator Interconnection Application to the Utility. I understand that I shall be required to furnish certain required technical data as requested by the Utility in support of this application.

Authorized Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_  
\_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Date: \_\_\_\_\_

## **INTERCONNECTION AND PARALLEL OPERATING AGREEMENT FOR EXPEDITED PROJECTS (INVERTER BASED - 10kW OR LESS)**

This Interconnection and Parallel Operating Agreement (“Agreement”) is entered into on \_\_\_\_\_ (insert date of last signature from last page) by \_\_\_\_\_ (the “Utility”), \_\_\_\_\_ (the “Customer”), and \_\_\_\_\_ (if applicable under Paragraph 5) (the “Property Owner”). Utility and Customer are sometimes also referred to in this Agreement collectively as “Parties” or individually as “Party.” Customer shall be the “Project Developer” as used in and for purposes of the applicable Expedited Utility Interconnection Requirements (“Interconnection Requirements”) approved by the Utility Board (“Board”).

### **I. RECITALS**

**A.** Customer is an electric service customer of Utility in good standing with the Utility and has submitted a Generator Interconnection Application to the Utility (the “Application”) which is incorporated herein by this reference.

**B.** Customer desires to interconnect an electric generating facility with maximum capacity of 10 kilowatts (“kW”) or less (the “Generating Facility”) with Utility’s electric distribution system and operate the Generating Facility in parallel with Utility’s distribution system, under the Utility’s Expedited Utility Interconnection Requirements and Net Metering Agreement approved by the Board (the “Standards”).

**C.** For purposes of this Agreement, “interconnect” means establishing a connection between a non-utility generating resource (in this case, the Generating Facility) and Utility’s distribution system. “Operate in parallel” means generating electricity from a non-utility resource (in this case, the Generating Facility) that is connected to Utility’s system. In all cases, terms shall have the meaning as defined in the Standards.

**D.** Interconnection of the Generating Facility with Utility’s distribution system is subject to this Agreement, the Application, the Interconnection Requirements, the Standards, and applicable Utility Rate Schedules, Customer-Generator Service Polices, and General Rules and Provisions (all as the same may be modified by the Utility from time to time), all of which are incorporated herein by this reference.

**E.** This Agreement does not address any purchase or sale of electricity between Utility and Customer nor does it create any agency, partnership, joint venture or other business arrangement between or among Utility, Customer and/or Property Owner.

### **II. AGREEMENT**

NOW THEREFORE, in consideration of the above recitals, the mutual covenants contained herein and for good and valuable consideration, the Parties agree as follows:

#### **1. Description of Generating Facility**

**1.1** The Generating Facility must be built with the following ratings, which shall not be changed without thirty (30) days advance written notice to Utility according to the notice requirements herein:

Photovoltaic/Solar (“PV”) Array Rating: \_\_\_\_\_ kW

Wind Turbine (WT) Rating: \_\_\_\_\_ kW

Hydro Rating: \_\_\_\_\_ kW

Service Type (circle one): Single Phase / Three Phase

Voltage Level: \_\_\_\_\_

Equipment Specifications: Make: \_\_\_\_\_ Model: \_\_\_\_\_

Certified Test Record Number (UL1741 Scope 1.1A): \_\_\_\_\_

**1.2** Generating Facility Location:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Street Address, City, State, Zip)

If Customer is not the owner of the property identified above, the Property Owner must sign this Agreement for the purposes indicated in Paragraph 5.

**1.3** Customer’s Utility service account number: \_\_\_\_\_

Property Owner’s Utility service account number (if applicable): \_\_\_\_\_

**1.4** The Generating Facility is planned to be ready for parallel operation on or about: \_\_\_\_\_ (insert date)

**2. Interconnection Facilities**

If it is necessary for Utility to install certain interconnection facilities (“Interconnection Facilities”) and make certain system modifications in order to establish an interconnection between the Customer Facility and Utility’s distribution system, the Interconnection facilities and modifications shall be described to the Customer.

**3. Design Requirements, Testing and Maintenance of Generating Facility**

**3.1** Customer shall be responsible for the design and installation of the Generating Facility and obtaining and maintaining any required governmental authorizations and/or permits, which may include, but shall not be limited to, easements to clear trees, and necessary rights-of-way for installation and maintenance of the Utility Interconnection Facilities. Customer shall reimburse Utility for its costs and expenses to acquire such easements / permits.

**3.2** Customer shall, at its sole expense, install and properly maintain protective relay equipment and devices to protect its equipment and service, and the equipment and system of Utility, from damage, injury

or interruptions, and will assume any loss, liability or damage to the Generating Facility caused by lack of or failure of such protection. Such protective equipment specifications and design shall be consistent with the applicable Expedited Generator Interconnection Requirements. Prior to the Generating Facility operating in parallel with Utility distribution system, Customer Shall provide satisfactory evidence to Utility that it has met the Expedited Generator Interconnection Requirements, including but not limited to the receipt of approval from the local building/electrical code inspector.

**3.3** At its own expense, Customer shall perform operational testing at least five (5) days prior to the installation of any Interconnection Facilities by Utility. Utility may send qualified personnel to the Generating Facility to inspect the facility and observe the testing. Upon completion of such testing and inspection and prior to interconnection Customer shall provide Utility with a written report explaining all test results, including a copy of the generator commissioning test report.

Customer shall, at its sole expense, perform capability tests each calendar year following the year of this Agreement to confirm generator rating and provide such test results to the Utility. In the absence of such test results, the Utility may follow the procedures of Breach contained in Section 7 herein.

Protective relay equipment shall be tested every two (2) years (unless an extension is agreed to by Utility) to verify the calibration indicated on the latest relay setting document issued by Utility. The results of such tests shall be provided to Utility in writing for review and approval. Utility may, at any time and at its sole expense, inspect and test the Generating Facility to verify that the required protective equipment is in service, properly maintained, and calibrated to provide the intended protection. This inspection may also include a review of Customer's pertinent records. Inspection, testing and/or approval by Utility or the omission of any inspection, testing and/or approval by Utility pursuant to this Agreement shall not relieve the Customer of any obligations or responsibility assumed under this Agreement.

**3.4** Customer shall operate and maintain the Generating Facility in a safe and prudent manner and in conformance with all applicable laws and regulations. Customer shall obtain or maintain any governmental authorizations and permits required for construction and operation of the Generating Facility.

#### **4. Disconnection**

Utility shall be entitled to disconnect the Generating Facility from Utility's distribution system, or otherwise refuse to connect the Generating Facility, if: (a) Customer has not complied with any one of the technical requirements contained in the applicable Interconnection Requirements, (b) the electrical characteristics of the Generating Facility are not compatible with the electrical characteristics of Utility's distribution system, (c) an emergency condition exists on Utility's distribution system, (d) Customer's protective relay equipment fails, (e) Utility determines that the Generating Facility is disrupting service to any Utility customer, (f) disconnection is required to allow for construction, installation, maintenance, repair, replacement, removal, investigation, inspection or testing of any part of Utility's facilities, (g) if a required installation (e.g., telephone line) fails or becomes incapacitated and is not repaired in a timely manner, as determined by Utility, or (f) Customer commits a material breach of this Agreement.

#### **5. Access to Property**

**5.1** At its own expense, Customer shall make the Generating Facility site available to Utility. The site shall



be free from hazards and shall be adequate for the operation and construction of the Interconnection Facilities. Utility, its agents and employees, shall have full right and authority of ingress and egress at all reasonable times on and across the property at which the Customer's Facility is located, for the purpose of installing, operating, maintaining, inspecting, replacing, repairing, and removing the Interconnection Facilities. The right of ingress and egress shall not unreasonably interfere with Customer's or (if different) Property Owner's use of the property.

**5.2** Utility may enter the property on which the Generating Facility is located to inspect, at reasonable hours, Customer's protective devices and read or test meters. Utility will use reasonable efforts to provide Customer or Property Owner, if applicable, at least 24 hours' notice prior to entering said property, in order to afford Customer or Property Owner the opportunity to remove any locks or other encumbrances to entry; *provided, however*, that Utility may enter the property without notice (removing, at Customer's expense, any lock or other encumbrance to entry) and disconnect the Interconnection Facilities if Utility believes that disconnection is necessary to address a hazardous condition and/or to protect persons, Utility's facilities, or the property of others from damage or interference caused by Customer's Facility.

**5.3** By executing this Agreement, Property Owner consents to and agrees to provide access to its property on which the Customer Facility is located to Utility as described in this section, but does not assume or guarantee other performance obligations of the Customer under this Agreement.

## **6. Indemnity, Insurance and Liability**

**6.1** Unless caused by the sole negligence or intentional wrongdoing of the other Party, each Party shall at all times assume all liability for, and shall to the extent permitted by law indemnify and save the other Party harmless from, any and all damages, losses, claims, demands, suits, recoveries, costs, legal fees, and expenses for injury to or death of any person or persons whomsoever occurring on its own system, or for any loss, destruction of or damage to any property of third persons, firms, corporations or other entities occurring on its own system, including environmental harm or damage arising out of or resulting from, either directly or indirectly, its own Interconnection Facilities, or arising out of or resulting from, either directly or indirectly, any electric energy furnished to it hereunder after such energy has been delivered to it by such other Party. The provisions of this Section shall survive termination or expiration of this Agreement.

**6.2** Customer shall obtain and continuously maintain throughout the term of this Agreement liability insurance covering bodily injury and property damage liability with a per occurrence and annual policy aggregate amount of at least \$500,000 and shall name Utility as an additional insured thereon..

When requested in writing by Utility, said limit shall be increased as provided by the notice. Such policy shall include, but not be limited to, contractual liability for indemnification assumed by Customer under this Agreement.

Evidence of insurance coverage on a certificate of insurance shall be provided to Utility upon execution of this Agreement and thereafter within ten (10) days after expiration of coverage; however, if evidence of insurance is not received by the 11th day, Utility has the right, but not the duty, to purchase the insurance coverage required under this Section and to charge the annual premium to Customer. Utility shall receive thirty (30) days advance written notice if the policy is cancelled or substantial changes are made that affect the additional insured. At Utility' request, Customer shall provide a copy of the policy to Utility. All certificates and notices shall be mailed to:

Board of Light and Power  
1700 Eaton Drive  
Grand Haven, Michigan 49417

**6.3** The provisions of this Section 6 shall not be construed to relieve any insurer of its obligations to pay any insurance claims in accordance with the provisions of any valid insurance policy.

**6.4** Notwithstanding anything in this Section, or any other provision of this Agreement to the contrary, any liability of a Party to the other Party shall be limited to direct actual damages, and all other damages at law or in equity are hereby waived. Under no circumstances shall a Party be liable to the other Party, whether in tort, contract or other basis in law or equity for any special, indirect, punitive, exemplary or consequential damages, including lost profits. The indemnification obligations and limits on liability in this Section shall continue in full force and effect notwithstanding the expiration or termination of this Agreement, with respect to any event or condition giving rise to an indemnification obligation that occurred prior to such expiration or termination.

**6.5** UTILITY SHALL IN NO EVENT BE LIABLE TO ANY OTHER PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, LOST PROFITS, REVENUE OR GOOD WILL, INTEREST, LOSS BY REASON OF SHUTDOWN OR NON-OPERATION OF EQUIPMENT OR MACHINERY, INCREASED EXPENSE OF OPERATION OF EQUIPMENT OR MACHINERY, COST OF PURCHASED OR REPLACEMENT POWER OR SERVICES OR CLAIMS BY CUSTOMERS, WHETHER SUCH LOSS IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, EVEN IF IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## **7. Breach and Default**

A breach of this Agreement (“Breach”) shall occur upon the failure of a Party to perform or observe any material term or condition of this Agreement, the Standards or the Interconnection Requirements. Upon a Breach by one Party, the non-breaching Party shall give written notice of such Breach to the Breaching Party. The Party in Breach shall have 30 days from the date of the written notice to cure the Breach. If a Breach is not cured within the 30-day period provided for herein, the Party in Breach shall be deemed in default (“Default”). The non-defaulting Party shall then have the right to terminate this Agreement by written notice, shall be relieved of any further obligations hereunder, and may pursue any and all remedies available to it at law or in equity. Customer shall enter into a Net Metering Agreement with the Utility prior to the interconnection of the Generating Facility to the Utility’s distribution system. This Agreement shall be null and void at any time when such a Net Metering Agreement is not in effect and the Utility may disconnect the Generating Facility from the Utility’s distribution system. The Net Metering Agreement for the Generating Facility under this Agreement has been and is incorporated herein and made a part of this Agreement by its reference

## **8. Governing Law**

This Agreement shall be interpreted, governed, and construed under the laws of Michigan (without regard to any conflict of law rules). Any action brought by either Party in connection with this Agreement, any of the documents incorporated herein by reference, or any matter relating thereto, shall be brought before the appropriate Michigan state court in Ottawa County, Michigan.

**9. Amendment, Modification or Waiver**

Any amendments or modifications to this Agreement shall be in writing and signed by all Parties. The failure of any Party at any time to require performance of any provision hereof shall in no manner affect its right at a later time to enforce the same. No waiver by any Party of the breach of any term or covenant contained in this Agreement, whether by conduct or otherwise, shall be deemed to be construed as a further or continuing waiver of any such breach or a waiver of the breach of any other term or covenant unless such waiver is in writing. This Agreement is subject to the General Rules and Provisions as set forth in the Utility’s Electric Rate Schedules and other Schedules that may apply. Such schedules may be revised from time to time upon approval of the Utility’s Board of Directors. Any conflict between this Agreement and any provisions of the Utility’s approved rate schedules shall be resolved in favor of such Schedule provisions. Terms defined in the Utility’s rate schedules shall have the same meaning when used in this Agreement unless the usage clearly indicates otherwise

**10. Notices**

All notices, requests, demands and other communications required or permitted to be given under this Agreement shall be given in writing (i) by personal delivery, (ii) by recognized overnight air courier service, (iii) by United States postal service, postage prepaid, registered or certified mail, return receipt requested, or (iv) by facsimile transmission, using facsimile equipment providing written confirmation of successful completed transmission to the receiving facsimile number. All notices to either Party shall be made to the address set forth below. Any notice shall be deemed to have been given on the date delivered, if delivered personally, by overnight air courier service or by facsimile transmission; or, if mailed, shall be deemed to have been given on the date shown on the return receipt as the date of delivery.

Addresses for Notification. If to:

Utility: Board of Light and Power  
1700 Eaton Drive  
Grand Haven, MI 49417  
Attn: Net Metering  
Tel. (616) 846-9200  
FAX (616) 846-3114

Customer: \_\_\_\_\_  
\_\_\_\_\_  
Attn: \_\_\_\_\_  
Tel. ( ) \_\_\_\_\_  
FAX ( ) \_\_\_\_\_

Notice to Property Owner (if different than Customer):

\_\_\_\_\_  
Attn: \_\_\_\_\_  
Tel. ( ) \_\_\_\_\_  
FAX ( ) \_\_\_\_\_

## **11. Term of Agreement and Termination**

This Agreement shall become effective upon execution by all Parties and, if applicable, the Property Owner, and it shall continue in full force and effect until terminated upon thirty (30) days' prior written notice by either Party upon Default of either Party as set forth in to Section 7, upon mutual agreement of the Parties, or upon a change in ownership of either the Generating Facility or the property at which the Generating Facility is located absent a valid assignment under Section 14.

Utility may independently terminate this agreement if, after one year, the Generating Facility has not completed installation and/or placed in operation.

## **12. Entire Agreement**

Except as otherwise provided herein, this Agreement, including all exhibits hereto and all documents incorporated herein by reference, sets forth the entire agreement between all Parties. This Agreement may not be modified or amended except by written amendment, signed by both Parties hereto.

## **13. No Third Party Beneficiary**

The terms and provisions of this Agreement are intended solely for the benefit of each Party, and it is not the intention of the Parties to confer third-party beneficiary rights upon any other person or entity.

## **14. Assignment and Binding Effect**

This Agreement shall not be assigned by a Party without the prior written consent of the other Party. Any attempt to do so will be void. Subject to the preceding, this Agreement is binding upon, inures to the benefit of, and is enforceable by the Parties and their respective successors and assigns. Customer agrees to notify Utility in writing upon the sale or transfer of the Generating Facility. This Agreement shall terminate upon such notice unless Utility consents to an assignment.

## **15. Severability**

If any provision of this Agreement is determined to be partially or wholly invalid, illegal, or unenforceable, then such provision shall be deemed to be modified or restricted to the extent necessary to make such provision valid, binding, and enforceable; or, if such provision cannot be modified or restricted in a manner so as to make such provision valid, binding or enforceable, then such provision shall be deemed to be excised from this Agreement and the validity, binding effect, and enforceability of the remaining provisions of this Agreement shall not be affected or impaired in any manner.

**16. Signatures**

The Parties to this Agreement hereby agree to have two originals of this Agreement executed by their duly authorized representatives. This Agreement is effective as of the later (or latest) of the dates set forth below.

***UTILITY***

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

***CUSTOMER***

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

***PROPERTY OWNER (IF APPLICABLE)***

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_